

National Aeronautics and Space Administration



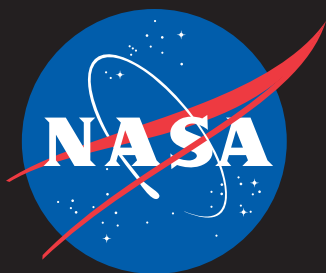
# IT Talk

July / August 2011

Issue 4



## Tomorrow's Workforce



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**Office of the CIO**  
**NASA Headquarters**

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*IT Talk* is an official publication of the Office of the Chief Information Officer of the National Aeronautics and Space Administration, Headquarters, Washington, D.C. It is published by the OCIO office for all NASA employees and external audiences.

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## Message from the CIO

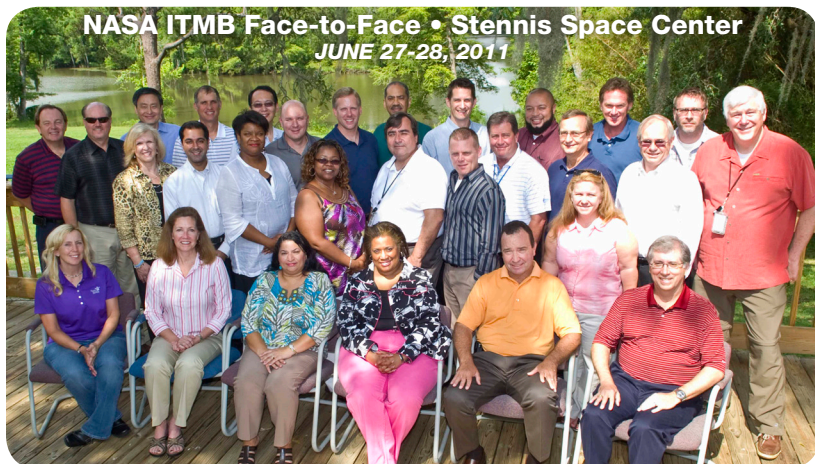
By Linda Cureton

From touch screens to open source, many of us are being conditioned to interact with technology in ways we hardly expected even a decade ago. It's like a script written out of the old television animated cartoon sitcom *The Jetsons*. Life is imitating art. Key trends for the next decade are driven by the emerging need to work with anyone from anywhere with any data using any device. With tomorrow's workforce becoming more tech savvy and headed in a new direction, have you ever thought about what the future workforce will look like? What should we do to ensure NASA employees possess the skill set necessary to overcome future challenges in this multinational, highly collaborative environment?

Younger generations have different communication styles and work habits than their predecessors when it comes to technology. Gen Xers and Millennials never have known a world without cell phones, iPods, computers, and the Internet. These technologies influence everything from how we choose to communicate and learn in the workplace to our expectations of flexible work hours and easy access to real-time data.

If we are going to successfully manage this multigenerational workforce, workplace learning will need to provide training and technology that fit both the learning styles and lifestyles of this diverse workforce.

In this issue of *IT Talk*, we will explore what some NASA Centers are doing to prepare future generations of the IT workforce. With the changing face of technology, today we must manage and develop the talent and skills required for future success. The things that we learn today anticipate what we can do in the workplace of tomorrow. ☞



## JSC—Innovate Today, Socialize Tomorrow



On May 4, more than 5,000 employees participated in the Johnson Space Center's (JSC's) second annual Innovation Day. With a focus on sharing current innovations and launching new ones, this Center-wide, stand-down day was an excellent opportunity for JSC to pilot the internal social networking site Yammer. Yammer has been used around the Agency for the last three years. Several Centers have been piloting the site including JSC. Yammer has introduced social networking as a business tool as well as to broadly educate employees at JSC on the Agency's policy for the use of social media in the workplace.

Yammer combines the features and capabilities of several social media platforms—Twitter, Facebook, LinkedIn, etc.—but limits communications to only those with the same e-mail address domain as the sender. That limitation actually makes it safer to use for work since your information is not shared publicly.

After the April 15 JSC Yammer kickoff for Innovation Day 2011, JSC's Yammer accounts more than doubled, going from approximately 2,000 registered accounts to more than 4,700.

What did JSC learn from the initial Yammer kickoff?

"First, it is still very early and we need to be cautious about lessons learned from Yammer at this point. Obviously there was a thirst from some employees for a suitable internal social media platform. Those folks are using it and very happy. Others are not quite sure how to use it yet, and some even prefer not to use it. As time goes on, and with more education, we will learn how to best use Yammer at JSC," said JSC's Chief Technology Officer, James McClellan.

With its proven ability to connect people, grow revolutions, and reduce barriers to enhanced collaboration—sometimes even instantaneously—social media are gaining traction and influence in today's workplace. Recent media reports have predicted that social media will continue their upward trend. But before Yammer is virally adopted here at JSC, we have to further educate our workforce on its appropriate use in a professional environment. With the proper education, our future workforce can transform into a more connected and social one, laying the groundwork for a wholly new way of doing business. ☞

# LaRC 2050—A Look at Tomorrow's Workforce

By Ed McLarney and Dan Cherry, with contributions from Eileen Spillane

## Share Your Thoughts on “Workforce of Tomorrow” By Fran DeMarco, LaRC

For several years, Langley Research Center (LaRC) has studied the impacts of significant technological changes of the future on our workforce. In 2008, LaRC joined the NASA Agency-wide concept of the “21st Century Lab.” Several NASA LaRC colleagues published a white paper titled “A Future State for NASA Laboratories, Working in the 21st Century.”

“This paper is not only about infrastructure and facilities, but about including the nature of the workforce and practices by which we will foster breakthrough technologies. Don’t expect there to be (ever) a traditional laboratory that we name Langley’s ‘21st Century Lab.’ Rather, expect us

to start working in the ‘21st Century’ mode with far greater networking with global colleagues and expect far greater collaboration with entities outside NASA, i.e., expect many brains at different locations working on the same or closely related problems and at a much higher speed enabled, at its core, by the ubiquitous nature of info-technology.”

Currently, the LaRC Chief Technologist and Office of Human Resources are continuing to expand on the study of future technological advancements and impacts to the workforce of the future at LaRC. To stimulate discussion, the article “LaRC 2050—A Look at Tomorrow’s Workforce” in this issue of *IT Talk* shares Langley’s approach to studying these

areas. The article is intended to provoke discussion about this topic. We would appreciate your reading the article and want to ensure that we capture the perspective of others. Those reading the article are in fact the “Workforce of the Future.” Feedback received will be provided to the authors of the article, Mr. Ed McLarney and Mr. Dan Cherry, and, if applicable, shared in a future issue of *IT Talk*. Instructions for submitting feedback are provided in that article.



Langley Research Center (LaRC) human resources and information technology leaders have teamed to explore and shape how work will be performed in 20 to 40 years at LaRC, from both employee and technology perspectives. The team’s vision is to shape near and midterm efforts to create a more progressive research environment.

This team will conduct research into long-term way-of-work studies in industry, academia, and Government to help create a vision and overarching framework for LaRC. Some of the primary goals of this team include the following:

- ◆ Seeking out input from interested visionaries across the Center to explore different possibilities for work methods and environments;
- ◆ Combining research examining people, processes, and technology;
- ◆ Conducting benefits analysis of the options;
- ◆ Exploring methods to communicate, collaborate on, and realize the future;
- ◆ Finding focused opportunities for scaled implementation of near-term prototypes and pilots; and

- ◆ Conducting continuous future-of-work learning through an iterative approach.

The LaRC future-of-work effort builds on the previous “21st Century Lab” project, with interest in (but not limited to) the following:

- ◆ collaborative culture;
- ◆ innovation;
- ◆ telecommuting, telepresence, virtual reality, and distributed teams;
- ◆ opportunities generated with advanced cognitive computing;
- ◆ tradeoffs between computational simulation and physical infrastructure;
- ◆ embracing a global, virtual technical community;
- ◆ invention, ideation, and problem-cultivation engines;
- ◆ knowledge propagation and intelligence gathering;
- ◆ other mission support areas to provide a consistent system of systems that enable cutting-edge research;
- ◆ training and experience in tele-education; and
- ◆ information technology security advances required for all of the above.

LaRC 2050 is nested within a larger LaRC mission success campaign to deliver on today’s commitments and prepare for tomorrow’s opportunities. The mission success campaign considers emerging advances in collaboration, learning, and revitalization. Revitalization subcomponents are the future of work and a sister effort in long-term infrastructure revitalization.

Change is continuous, and we at NASA LaRC would much rather embrace change, steer it, and shape the future than simply be bystanders. Proactively shaping our future work environment enables us to maintain our competitive edge and chase the dreams at the heart of NASA.

The article is intended to provoke discussion about this topic. Please share your thoughts by submitting comments to [LaRC-DL-OCIO-Feedback@mail.nasa.gov](mailto:LaRC-DL-OCIO-Feedback@mail.nasa.gov).

About the Authors: Ed McLarney is the LaRC Chief Technology Officer for the Chief Information Officer. Dr. Gamaliel “Dan” Cherry is a Human Resources Specialist for the LaRC Office of Human Capital Management. ☐



# Goddard—Workforce of the Future

By Danielle Moore, Communications Lead, Information Technology and Communications Directorate/CIO, GSFC

For more than 50 years, the Goddard Space Flight Center has held a position of preeminence as a major laboratory for developing and operating unmanned scientific spacecraft. Our expertise in this realm is unparalleled; nevertheless, it is a

seasoned workforce where the landscape around us is changing. To maintain our competitive advantage in this emerging environment, we must work together to strengthen the strategic business capabilities that give the Center its unique edge.

In the past, Goddard has made numerous contributions to the scientific community. From supporting our race to the moon expedition to gathering data from space from the Hubble Telescope, Goddard has provided an infrastructure and workforce that has been able to support the overall mission of NASA. However, as time moves on, the need for restructuring and updating our workforce has become a big challenge

for the Center. With new advances in technology, such as Cloud Computing and ability to share massive amounts of data, we are faced with challenges of how to integrate these new technologies into Goddard's mission. These challenges can be handled appropriately as younger generations come into Goddard with new ideas and fresh minds that can tackle these advancements in technology. However, with this new generation comes another task. How do we integrate, these young, well-educated, highly motivated, but inexperienced individuals into a complex environment such as Goddard?

Committees such as New & Developing Professionals (NDP) Advisory Committee have been established to help transition younger generations into the Goddard Space Flight Center. Younger generations may have highly-innovative ideas to help bring Goddard into a more futuristic age, but we need more involvement in committees like NDP to help enhance the sharing of knowledge between new and experienced employees so that the younger generation will be more forthcoming with their ideas. Bringing new and innovative ideas into Goddard will continue to help Goddard grow and attract more young and knowledgeable students to build our workforce for tomorrow. ❧



Every quarter, Linda Cureton has a lunch meeting with employees to hear their concerns, ideas, and thoughts about Information Technology. This was the first luncheon with the CIO (June 16, 2011).

## JSC: Office of the Future

By: Debbie Nguyen and Laura Gross, JSC Information Resources Directorate

The Information Resources Directorate (IRD) is the foundation of service for information technology (IT) at NASA's Johnson Space Center (JSC). IRD's vision, however, is to be more than just a provider of IT services and products.

"We are striving to change our image as simply a provider of IT utilities by partnering with the Programs and Center organizations in shaping IT solutions, systems, and architectures. That's our vision," said Larry Sweet, IRD's director and JSC's CIO. "There are some uncertainties in the future as the Space Shuttle Program retires. To adapt, we are actively working to update our business model and working with other programs to identify what their future needs will be. In essence, we want to partner with programs and new projects in a consulting capacity as they define their future requirements."

To look beyond just the technical aspects of IT planning, an organization needs a workforce with the right skill mix.

"Recent industry studies on the IT workforce performed by organizations like Society for Information Management and PricewaterhouseCoopers concluded that disciplines such as business, communications, and project management are critical. A strong IT workforce isn't just about the technical expertise anymore," said Nancy Garrick, IRD's Human Resources Training and Development representative.

New and upcoming IRD projects exemplify this shift toward a more well-rounded approach to building an IT workforce. One example is an IRD initiative called "Office of the Future." The fundamental idea behind this initiative is to anticipate the needs of the future JSC worker, by engaging employees in the discussion. Two critical aspects of the project's success will be maintaining both employees' current access and a continuous and comprehensive assessment of current technology.

"This project essentially asks the questions: What will the future workspace look like and need? With the workforce becoming more mobile, is it necessary to have a phone? Will we even need a conventional desktop computer, or will our computers become mobile tablets, or a smartphone docked to a screen? We don't know the answers yet, but we're working on it," said JSC's Chief Technology Officer, James McClellan.

Although we can't predict the future, IRD is helping to shape it. ❧



# At JPL, “MESH” Means “Multi-generational Exchange Starts Here”

By Victor Luo, Rebecca Campos, and Paula Caterina, Jet Propulsion Laboratory

In 2009, following a large influx of Early Career Hires (ECH) to the Jet Propulsion Laboratory (JPL), a small group of ECH professionals joined forces to seek out opportunities to meet, network, and collaborate with colleagues at the Lab, and to make JPL's onboarding process less painful. After they proposed their ideas to management, approval was granted to establish the Multi-generational Exchange Starts Here (MESH) Affinity Group under the Diversity and Inclusion Oversight Committee.

MESH's charter seeks to improve understanding of the similarities, strengths, and differences of the many generations working together at the Lab. The goal is to build a workplace environment that values unique ideas, opinions, and attitudes; resulting in a more creative and supportive environment.

Victor Luo, an ECH and new software engineer and one of the authors of this article, took the initiative in launching MESH. Luo worked to establish the group with support from a small team representing various generations. Luo's previous experience at Boeing had shown him how important and effective an open and collaborative work environment is and how an outreach program for new hires can allow for professional growth.

One of MESH's first successes was to work with the OCIO for the design of a MESH SharePoint site, allowing MESH members a place to create a profile and to network and share experiences and interests. The MESH site provides resources for employees to come together and “mesh” through shared activities and collaboration.

MESH has been very successful in presenting employees with a wide range of events including Tech Talks, JPL's first annual Talent Show, and even a “U.N. of Comedy” show.

MESH also partners with Habitat for Humanity to help employees get involved in home building and repair. Additionally, MESH members work with John Muir High School in Pasadena, CA, and the local Summer Aerospace Games.

Beyond that, MESH has arranged for employee noontime talks and has sponsored employee trainings, such

as True Colors Personality Identifier, Generations in the Workplace, and Iridescent. MESH has trained employees interested in reaching out to the schools in the community and inspiring student interest in science and engineering. MESH also organized a variety of welcoming events for summer interns including a career panel discussion, an ice cream social, and a picnic.

MESH seeks to create a JPL community where open communication aids the transfer of knowledge about JPL's work and where friendships happen across generations. The continuing goal of MESH is to create an atmosphere of collaboration resulting in a more productive and rewarding work environment.

For more information, contact: [MESH@jpl.nasa.gov](mailto:MESH@jpl.nasa.gov) ✉



Group picture with our MESH T-shirts at our kickoff meeting in January 2010.



MESH volunteering with Habitat for Humanity.



MESH hosting JPL at the Summer Aerospace Games, an annual event in which all aerospace companies get together on the beach and compete in athletic contests. That's JPL in the gray T-shirts.



The Jet Propulsion Laboratory (JPL) has developed and deployed a social networking and collaboration service called Gateway, to meet users' growing demand to connect internally and collaborate with others. This service was developed on an extensible platform using SharePoint 2010. It serves as the underpinnings of a broad networking and collaboration strategy.

Gateway offers four key components: My Sites, My WorkSpaces, TeamSpaces, and LineSpaces. As these tools have been designed following the Software-as-a-Service (SaaS) model, they are all immediately available to be provisioned, scaled, and configured by the end user. All of the tools may further be leveraged for development and customization on the underlying SharePoint layer.

Social networking technologies have grown into an essential component in nearly every organization. The core capability that has driven this growth is the users' ability to easily share and find access-controlled information about coworkers and match team members' technical skills to job requirements. It's a source of information for every person in an organization that is accessible at any time from anywhere through a Web browser. Gateway is available to all JPL employees and affiliates.

Now that the problem of identifying potential team members has been solved, we need to enable a collaborative area to allow distributed people and teams to meet their business challenges. Historically, collaboration was achieved by e-mail and thumb drive transfer of files between teams. This time-consuming process was fraught with version management and merging-of-information issues. Although file shares helped, frustration continued when someone was editing a particular file and others were locked out.

Furthermore, the only way to determine if new files were added or updated was to navigate the share and review the date stamps of each file. Gateway provides key collaboration "Spaces" that are defined and suited to a particular need or purpose, thereby eliminating version control and concurrent editing problems. Spaces

are effectively predefined templates of functionality within a Web site that are designed to meet the core needs of a particular audience and are listed below.

My Sites consist of user profiles that allow every user a viewable and searchable platform to showcase their experience, skills, past projects, schools attended, and the like. New employees and team members can reduce the time and barriers to developing team relationships because they have insight into whom they are working with and what skills and experience are available in the team. This environment builds teams by developing relationships based on individuals' shared interests and experience.

focusing on meeting the structured needs of an organizational hierarchy (LineSpaces) and the cross-organizational and purpose-driven focus of a work group or functional team (TeamSpaces). These spaces adhere to a more consistent look and feel supporting people working on multiple teams to easily move between sites. All spaces are deployed through standardized templates and share user interfaces to increase adoption and reduce overall training demands.

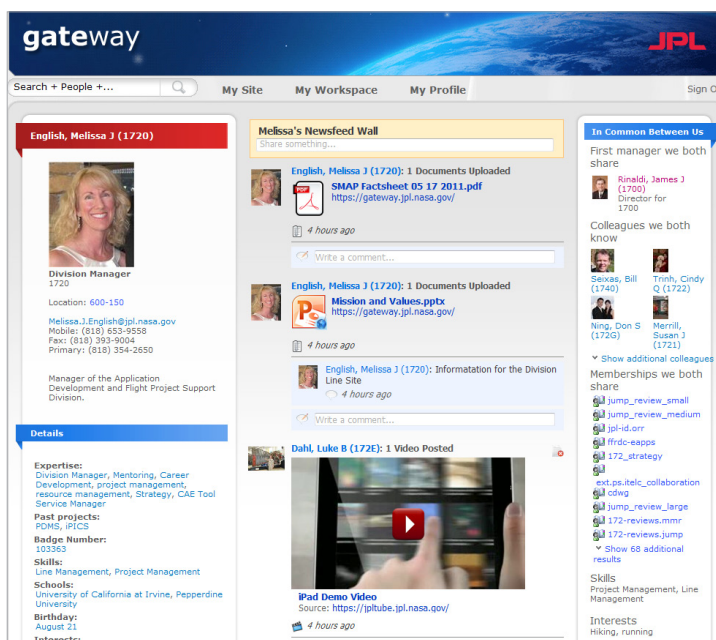
Spaces are linked through a dynamic newsfeed much like the Facebook wall. The newsfeed is a key feature to all Spaces; it aggregates content and postings from colleague profiles.

LineSpace and TeamSpace sites allow individuals a single view into the collaboration area. All files and comments posted by colleagues on their individual or subscribed team pages automatically feed each team member's personal newsfeed. This provides notification to team members of relevant dialogue between members and document updates, eliminating the need to browse multiple sites for updates.

A key component of the platform is the ability to upload and share files in their respective Spaces. Users may upload and quickly set permissions on files to grant appropriate privileges. Additionally, files that are created from the

Microsoft Office suite can be edited from within the browser window without opening the client application. Users may concurrently edit files through either the browser or the client-side Microsoft Office application in real time (which requires Office 2010/2011). This eliminates time spent merging documents or searching for the latest version—the single source and latest version is always viewable.

Social networking in the workplace contributes to an effective business environment. Pairing social networking with a rich collaborative environment is an enabling proposition. Gateway removes the traditional boundaries associated with collaboration between individuals and teams and is a key component to the success of IT at JPL. ☞



My WorkSpaces provide every user with a collaboration area to upload and share files, track tasks, and store information in a centrally managed environment. A key feature is the ability to work on the "gold source" of any file and to concurrently edit files, track versions, and easily maintain information. This improves overall efficiency and reusability of information, or "findability," through enhanced search capabilities across a centralized offering. The customizable Workspace component allows modification of over 40 core "apps" available from the collaboration toolkit. Users may create document and picture libraries, task tracking areas, calendars, and more, all from their Web browsers.

LineSpaces and TeamSpaces leverage the same platform and features while



# At NEACC, Tornadoes Teach

On Wednesday, April 27, at 2:25 a.m., the National Weather Service (NWS) began issuing alerts and storm warnings for the North Alabama area where the Marshall Space Flight Center (MSFC) and the NASA Enterprise Applications Competency Center (NEACC) are located. (The NEACC is a few miles west of MSFC.) Powerful storms were moving in.

By the time employees began arriving for work, a new tornado warning lasting until 2 p.m. had been issued. All day Wednesday, warnings continued from the NWS as well as from MSFC.

At 1:39 p.m., an Enhanced Fujita Scale-5 (EF-5) tornado, the strongest of the six-category scale, hit Limestone and Madison counties. Through the remainder of the day, the NWS confirmed a total of 33 tornadoes on the ground in North Alabama, including several EF-4 tornadoes. Power was lost to the area at 5:47 p.m., and due to massive damage to the utilities infrastructure, the outage was expected to last several days.

The NEACC implemented a set of activities that evening, using emergency power supplied by MSFC generators. For the next nine days, the facility maintained entrusted Enterprise Business Applications with little impact on the Agency's user base. Behind the scenes, however, a key group of essential personnel was moving mountains in order to provide those services.

## Top Priority: The People

The NEACC and the Enterprise Applications Service Technologies (EAST) management teams kicked into high gear immediately, using every means available to check on each employee's status. Sadly, reports of property loss and damage were rolling in. Worst of all, the son of one NEACC team member perished in the storms. Some employees

immediately began to volunteer support to the teammates in need. They helped with debris removal, donated clothing and food, and raised money for the victims.

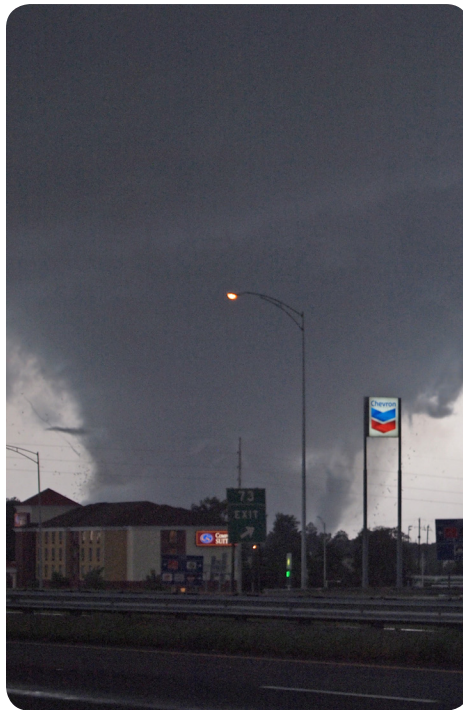


Photo by Mike Wilhelm (@bamawx)

Early reconnaissance following the storms revealed no damage to the NEACC buildings, but power outages rendered the facility unsafe. Local authorities imposed a dusk-to-dawn curfew until further notice. On Thursday morning, April 28, MSFC's CIO management used a temporary Emergency Command Center in Building 4207 on the MSFC campus, where generators provided power for essential services.

Managers determined essential personnel requirements, and the small team began polling employee status and availability.

Twice-daily teleconferences began to assess status and manage the situation. In the meantime, the Agency's Emergency Notification System (ENS) began reaching out to all MSFC team members, and employees received notification that the Center was closed for Friday, April 29. By Sunday morning, power was beginning to be restored to some areas of Huntsville, and each subsequent day saw more and more power restored.

However, power restoration to MSFC and the U.S. Army's Redstone Arsenal had to be very carefully monitored due to their sensitive infrastructure. MSFC remained closed through the following week. With a heavy reliance on the extraordinary work done by MSFC facilities and NASA Integrated Services Network teams, the NEACC continued essential operations until Friday morning, May 6. At that time, NEACC systems were switched back to commercial power, and employees were allowed into the NEACC buildings. By Saturday, May 7, power had been restored to most customers in the Huntsville area who were outside the tornado damage. MSFC reopened Monday, May 9.

Luckily, the MSFC facilities were unscathed, but had they been damaged, the Center would have engaged SunGard, its contracted disaster recovery service, to operate essential applications. The NEACC is in the process of completing a Rapid Recovery Architecture (RRA) at Kennedy Space Center and will be able to leverage that capability for future emergencies rather than continuing to rely on SunGard services.

## Key Lessons Learned

In retrospect, the accomplishments of the NEACC were remarkably effective and often heroic. However, as in most endeavors, lessons can be learned and applied to improve future efforts.





# Disaster Preparedness

One of the first tasks assigned to the NEACC team was to capture lessons learned. More than two dozen actions are being worked on in response so that NASA may be better prepared for future events, including final testing of the new RRA. Three very key lessons are related to communication with the workforce in emergency circumstances:

## **Some team members did not provide contact information for emergency notification.**

Strong emphasis should be put on keeping the ENS information up to date.

## **With voice and Internet communication outages impacting most of the workforce, texting offered the most widely available means of communication, yet there are people who are unfamiliar with texting or do not subscribe to that service.**

The workforce should be educated on texting, as well as how critical it is to being able to communicate during emergencies.

## **Once power and Internet connectivity became available outside the NEACC, teleworking was an option; however, a segment of the NEACC workforce did not have Virtual Private Networking (VPN) capability.**

Provide VPN capability to the workforce and encourage frequent use in order to retain familiarity with the logon process.

## **Returning to “Normal”**

For some victims of the storms, life will never be the same. But for those remaining, life must go on. At the NEACC, fundraising efforts continue for the Red Cross and for Center teammates. Science Applications International Corporation (SAIC) and its partners in the EAST contract have reached

out to employees needing help, providing both monetary help and much-needed paid leave to those dealing with storm damage. Employees have brought in bags of food, clothes, and shoes for their friends and coworkers. Work has continued, and a major midyear release was completed on May 16 without a hitch. Except for the boxes of donations in the cafeteria, one could almost forget the storms happened while inside the NEACC facilities. However, a short drive brings the storm's aftermath into view—a not-so-subtle reminder to be prepared.

*(Photos in this article were taken by Michael Porterfield unless otherwise specified.)* %

Photo by Scott Everett (@scoeverett)





# Education On Track at IT Summit

Education and connecting with young people are going to be high priorities at NASA's Second Annual IT Summit. The event will be held August 15–17 at the Marriott Marquis Hotel in San Francisco, CA. A track dedicated to education will include three sessions, an awards ceremony, a luncheon, and an "Education BLAST OFF" geared toward getting teens excited about potential careers in aeronautics and space exploration. The track will also take a look at how education might impact the building of the IT workforce pipeline through the use of instructional technology.

The education track starts with a presentation about NASA's "One Stop Shopping Initiative" or OSSI, a broadly conceived program to reach students, teachers, NASA managers, and industry partners with facts about how young students can get involved in NASA projects. Leading the session will be Brenda Collins, the Higher Education Manager at NASA Ames Research Center. OSSI includes information about internships and fellowships, such as the Student On-Line Application for Recruiting (SOLAR) interns, fellows, and scholars; the NASA Student Ambassador Virtual Community; the Student On-line Research Journal; feature stories and videos; and much more. OSSI brings together NASA's Education, Human Capital Management, and Diversity and Equal Opportunity offices, as well as Mission Directorates to reach out to eligible students.

An important goal of OSSI, like much of NASA's youth outreach, is to make sure that America's young people have opportunities to get engaged in Science, Technology, Engineering, and Math (STEM)—which also benefits the U.S. economy over the long term.

The next session will be "Innovative Designs and Uses of Technology in Academia." It will be led by Ahsan Choudouri, principal investigator and director, NASA University Research Center (URC) at California State University, Los Angeles, and Thomas Strybel, principal investigator of the Center for Human Factors in Advanced Aeronautics Technologies (CHAAT) at California State University, Long Beach. The innovative designs that will be discussed are supported by two NASA Office of Education projects: the Minority University Research and Education Program and the Experimental Program to Stimulate Competitive Research.

Another session, "Informal Education in the Space Age," will look at learning outside the classroom at NASA. Those environments include everyday experience, designed spaces such as museums, nonschool programs for science learning, science media, and, of course, the plethora of Internet sources. Leading that session will be Anita Sohus, the project manager for NASA Informal Education Opportunities at the Jet Propulsion Laboratory.

OCIO's Excellence in Teaching Awards will also be given out on the first day of the Summit. Winners include the following:

- ◆ Lori Beth Bradner will receive the OCIO Excellence in Teaching Award. Bradner is a master teacher of high school advanced placement (AP) environmental science, chemistry honors, and Earth/space science classes in Lakeland, FL. It is not certain how this fits in with her teaching approach, but earlier in her career, Bradner spent some time as a professional clown for Ringling Brothers and Barnum & Bailey Circus.
- ◆ Katelyn Doran, a graduate student at the University of North Carolina at Charlotte, will receive the OCIO Excellence in Student Research Award. Doran has been part of the NASA family since summer 2009, when she was an Undergraduate Student Research Program student at Kennedy Space Center. She is currently a NASA student ambassador and a participant in the NASA Graduate Student Researcher Program.
- ◆ The OCIO Excellence in Faculty Research Award will be presented to Helen Ryaciotaki-Boussalis of California State University, Los Angeles (CSULA), where she is a professor of electrical engineering and the principal investigator for the Structures, Propulsion, and Control Engineering (SPACE) at NASA URC. CSULA is a Hispanic-Serving Institution, and Ryaciotaki-Boussalis has helped to graduate more than 300 underrepresented and underserved engineers at the school.

On Tuesday, August 16, the second day of the conference, OCIO will hold a luncheon titled "Pearls of Wisdom: Our Braided Lives" in support of the White House Council on Women and Girls Initiative. On March 11, 2009, President Obama signed an Executive Order to provide a coordinated Federal response to the challenges confronted by women and girls and to ensure that all Cabinet and



Cabinet-level agencies consider how their policies and programs impact women and families. The luncheon will include women from NASA, business and industry, the Federal community, and academia. A group of high school-age women selected from various NASA summer education programs will also attend. This luncheon will promote mentoring through the sharing of "Pearls of Wisdom" between the professional women invited to participate and the female high school students.

Wednesday's "Education BLAST OFF" will be a high-energy event that will bring 200 teens to the IT Summit to experience NASA science up close and personal. They will see a live drop and demonstrations of microgravity from Cisco. They will have a chance to meet face-to-face with technology types and view demonstrations from IBM, Raytheon, Intel, Apple, Google, Hewlett-Packard, and other corporate sponsors of the IT Summit.

The students will also hear a talk by Leland Melvin, a former astronaut and now NASA Associate Administrator for education, and a motivational presentation titled "Zero to Breakthrough" by Vernice Armour, the first African-American female U.S. combat pilot.

Between 8:30 and 11 a.m., the education/youth events will be webcasted and simultaneously transmitted via two-way videoconferencing. Those events include the talks by Melvin and Armour and demonstrations of microgravity and allied phenomena. Between 10 and 11 a.m., students will present their own experimental work.

To learn more about the IT Summit or to register, go to <http://www.regonline.com/itsummit2011>. NASA's Associate Administrator and Chief Information Officer Linda Cureton is hosting the event. The conference will be close to Silicon Valley, and meeting planners expect a strong turnout of engineers, visionaries, and executives. ☼



# TEDxNASA@SiliconValley

Ever heard of TED? How about TEDx? Even better — have you been to a TEDxNASA conference? This is your chance! The next TEDxNASA event will be the TEDxNASA@SiliconValley 2011, Wednesday, August 17, at the Marriott Marquis hotel in San Francisco, CA, after the final luncheon of the NASA IT Summit. The event is sponsored by the four NASA research Centers: Ames, Glenn, Langley, and Dryden. The event is widely supported at NASA Headquarters for its public outreach, innovation, and support of IT and green technologies. The theme is "Extreme Green."

TED is a small nonprofit devoted to "ideas worth spreading." It began in 1984 as a conference bringing together people from three worlds: technology, entertainment, and design. Since then, its scope has become ever broader. Along with two annual conferences, TED includes the award-winning TED Talks, the annual TED Prize, and the TEDx programs.

TEDx was created in the spirit of TED's mission, "ideas worth spreading." The program is designed to give communities, organizations, and individuals the opportunity to stimulate dialogue through TED-like experiences at the local level. The TED conference provides general guidance for the TEDx program, but individual TEDx events, including ours, are self-organized.

There have been several TEDxNASA conferences, designed more specifically to explore ideas that are applicable to NASA's missions and goals.

TEDxNASA@SiliconValley2011 will take place in the same venue as NASA's IT Summit, which attracts industry from across the world interested in furthering technologies for IT. The event's theme, "Extreme Green," will emphasize the role that green technologies can play to improve life on Earth as well as life in space.

The event will feature speakers on a variety of topics including carbon-free aviation, extreme sustainability in space and on Earth, alternative fuels, and power management and storage. And, in the spirit of TEDx, we will also feature inspirational talks to motivate us toward green practices and policies, some exciting "green" entertainment, and a few other surprises.

More than 800 people are expected to attend, with millions more enjoying the program via live streaming video over the Internet.

Look for program information on the IT Summit Web site, as well as the TEDxNASA Web site.

For more information about TEDxNASA, go to <http://tedxnasa.com>.

Follow us on Facebook at <http://www.facebook.com/TEDxNASA>.

For information about the NASA IT Summit 2011, go to <http://www.nasa.gov/offices/ocio/itsummit>. ☞

# Stennis IT Expo

On June 21, 2011 Stennis Space Center held its 7th Annual Information Technology (IT) Expo which was sponsored by the Center's Office of the Chief Information Officer (OCIO). The event highlighted services and capabilities which are available through the NASA SSC OCIO and its support contractors: They include ASRC Research and Technology Solutions (ARTS) which provides Information and Technical Services (ITS) and HP Enterprise Services which provides Agency Consolidated End-user Services (ACES) as part of the NASA Information Technology (IT) Infrastructure Integration Program (I3P). The NASA Shared Services Center (NSSC) also showcased the Agency Enterprise Service Desk (ESD).

An executive session launched the annual information technology expo. SSC CIO, Dinna L. Cottrell, began with opening remarks and then introduced the Agency CIO, Linda Y. Cureton, who discussed the NASA I3P acquisitions, how they will be implemented and their benefits. Vincent (Vinnie) H. Madsen, ACES Account Executive & Program Manager, with HP Enterprise Services also presented "Doing IT Right, With NASA, for NASA". The session ended with Scott D. Altman, Vice President of Strategic Planning and former NASA astronaut, and Kate Burk, ITS Program Manager, both with ARTS doing a presentation called "Information Technology Enabling Missions: NASA and Stennis Federal City."

There were several seminars which featured services and emerging IT technologies:

- ◆ Containerized and Performance Optimized Datacenter Innovations, presented by Greg Palmer with HP Enterprise Services;
- ◆ Exploring the Enterprise Service Desk website presented by Chuck Breath with NSSC Service Provider;
- ◆ IT Security-Current Issues and Trends to Watch-Information for the workplace and home, presented by Clyde Sellers with ARTS.

IT Expo attendees also obtained information on applications support, the Design and Data Management System, IT Security, ITS Video Production & Audio Visual Services which showcased 3D technology, Records & Documentation Management which featured Records Storage Tracking Inventory Database (RESTID), the NASA Badging System which provided opportunities to reset pin numbers for PIV II card holders, and the Stennis Data Center.

Product information was provided by several ACES HP Enterprise Services vendors which included: Apple, AT&T, Citrix, COLSA Corporation, EMCO Technologies, Knoica, KST Data, Inc., Lenovo, Microsoft, ProfitLine, Inc., & T-Mobile. HP Enterprise Services also showcased their Performance Optimization Data Center (POD).

The IT Expo also offered attendees an opportunity to play the "Name that App" game by identifying acronyms of the various Stennis Data Center applications. Door prizes were drawn for attendees who registered at the Atrium's entrances and participated in the "Name that App" game.



The IT Expo provided a great opportunity for SSC employees, which includes NASA, resident agencies, and contractor employees, to meet with technology providers and obtain details on their products and services. For more information on the highlighted services or capabilities, call the SSC OCIO at 228-688-6246. ☞



# OpenStack Summit 2011—Collaborating on Cloud Computing

By: Penny Hubbard, CIO Communications, Ames Research Center



At the OpenStack Summit, held April 26–29 in Santa Clara, CA, a global community of more than 450 technologists, developers, researchers, corporations, and cloud computing experts from 17 countries gathered to talk about the cloud and open-source computing.

OpenStack, an open-source cloud computing initiative, pulls together this global community to contribute to and collaborate on driving open-cloud computing standards for interoperability and portability. Cloud computing is a way to deliver computing resources, such as software, storage, and virtual computing power, as services over the Internet.

James Williams, CIO, Ames Research Center, was a featured speaker, highlighting the amazing progress NASA has made developing the Nebula Cloud Computing program and how the OpenStack

collaboration has been pivotal in its success.

NASA launched the Nebula Cloud Computing platform to provide Agency researchers with a range of services powerful enough to manage NASA's large-scale scientific datasets. Nebula offers unparalleled computer capability, storage, and bandwidth to users at NASA's Ames Research Center in Moffett Field, CA, and Goddard Space Flight Center in Greenbelt, MD.

NASA is already realizing significant return on investment, with everything from smarter energy use to better mission and scientific support. Nebula achieves one of NASA's goals—to share NASA's achievements with the public, educators, and students; provide opportunities to participate in our mission; foster innovation; and contribute to a strong national economy.

In fact, we heard favorable comments at the summit, such as “Developers from all over the world want to contribute code because they want to be part of space exploration” and “My code could be part of NASA Nebula. This is as close to being an astronaut as I am ever going to get!”

With OpenStack user groups located across the globe, a collaborative movement is beginning to take off. Major corporations are already seeing the benefit of the cloud, and we will all benefit from the open standards the OpenStack community has already developed. This year's event boasted more than 450 attendees, compared with only 200 at the 2010 event. Imagine the cloud in another year, and the progress the OpenStack collaboration will make.

As Ames CIO Williams recently put it, via videoblog to his Ames team, “It's exciting being on the leading edge of technical innovation. We are changing the way things are being done in computational services, not just in the Government, but across the U.S. and the world, and it all started right here!”

For more information about the OpenStack community, visit [www.openstack.org](http://www.openstack.org). ☞



James Williams, CIO,  
Ames Research Center

IT Talk

## ACES: The Journey Begins!

Hewlett-Packard Enterprise Services (HPES) is the new Agency Consolidated End-User Services (ACES) service provider. It replaces the Outsourcing Desktop Initiative for NASA (ODIN) contract. The NASA Shared Services Center (NSSC), the host Center, is standing up an End-user Service Office that is working with HPES. ACES is one of five procurements under NASA's IT Infrastructure Integration Program (I3P). I3P is NASA's program to provide Agency-wide management, integration, and delivery of information technology (IT) infrastructure services in the areas of Web services, communication services, Enterprise applications, end-user services, and the Enterprise Service Desk.

Roll-out schedules vary by Center for each of the services. Wave 1 Centers (Dryden Flight Research Center [DFRC], Goddard Space Flight Center [GSFC], Kennedy Space Center [KSC], and Headquarters) have seen an influx of HPES

personnel in the last month under the ACES contract. This contract provides end users with services like desktops, laptops, printers, smartphones, cell phones, and e-mail. The End-User Service Office (located at NSSC), a representative from the Office of the Chief Information Officer (OCIO), and HPES visited each Wave 1 Center's IT personnel to start the transition. Wave 2 Centers (Marshall Space Flight Center [MSFC], NSSC/Stennis Space Center [SSC], Glenn Research Center [GRC], and the Jet Propulsion Laboratory [JPL]) and Wave 3 Centers (Johnson Space Center [JSC], Langley Research Center [LaRC], and Ames Research Center [ARC]) either have received a videoconferencing briefing or have one scheduled. These will be followed up with individual face-to-face Center visits. Outreach is planned with all NASA Centers that will include Agency/Center e-mails, technology road shows, Center-wide briefings, flyers, and posters.

An I3P Summit was held at NSSC from June 14 to 17 to bring together representatives from ACES, the Enterprise Service Desk, and the NASA

By John Sprague, End User Service Executive,  
Office of the Chief Information Officer (CIO)

Integrated Communications Services (NICS). A contract requirement and Information Technology Infrastructure Library (ITIL) best practices were the objectives. The team, led by Dan Vogel from OCIO, Six Sigma Black Belt (an expert in process improvement technique), created an Associate Contractor Agreement (ACA) between the three contractors and initiated Operational Level Agreements (OLAs), along with other products. The ACAs and OLAs will be used as a template for agreements with Center contracts in the coming weeks and months. For more information on ACES, visit the I3P Web site at [http://insidenasa.nasa.gov/ocio/i3p/i3p\\_aces\\_faq.html](http://insidenasa.nasa.gov/ocio/i3p/i3p_aces_faq.html).

For questions at your Center, please contact your Center Integration Lead: ARC—Susan Levine, DFRC—Russell Leonardo, GRC—Michael Heryak, GSFC—Esmond Marvray and Tamra Goldstein (alt.), Headquarters—Elaine Bowman, JSC—Robert Neil, KSC—Jeanne O'Bryan, LaRC—Sue Lemon, MSFC—Terry Luttrell, SSC—Teenia Perry, and NSSC—Tracy Patman. ☞



National Aeronautics and Space Administration

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